

WHAT IS CLAIMED IS:

1. A secondary air turbocharger for an internal combustion engine of a motor vehicle, said turbocharger comprising a turbine and a compressor, wherein a turbine wheel of the turbine and a compressor wheel of the compressor are mounted on a rotatable common shaft supported by a bearing assembly inside a turbocharger housing; said bearing assembly comprising at least one roller bearing, and at least a portion of the housing being enclosed externally in the area of the bearing assembly by a sound absorbing insulating material.
2. A secondary air turbocharger according to claim 1, wherein the turbocharger housing has a smaller diameter in the area of the bearing assembly than in the area of the turbine and the compressor, and the insulating material encloses the area of the bearing assembly between the turbine and the compressor.
3. A secondary air turbocharger according to claim 1, wherein the insulating material at least substantially completely encloses the housing in the area of the turbine, the bearing assembly and the compressor.
4. A secondary air turbocharger according to claim 1, wherein the insulating material comprises a synthetic resin foam.
5. A secondary air turbocharger according to claim 4, wherein said synthetic resin foam is a polyurethane foam.
6. A secondary air turbocharger according to claim 4, wherein the synthetic resin foam contains at least one sound absorbing filler.

7. A secondary air turbocharger according to claim 1, wherein the insulating material contains at least one fiber selected from the group consisting of glass fibers and mineral fibers.

8. A secondary air turbocharger according to claim 1, further comprising a shell externally enclosing the insulating material.

9. A secondary air turbocharger according to claim 9, wherein the shell is provided as a mold into which a synthetic resin foam is injected.

10. A secondary air turbocharger according to claim 9, wherein the shell comprises two interconnectable half shells.

11. A secondary air turbocharger according to claim 10, wherein the two half shells are constructed as a one-piece, injection-molded synthetic resin component and are joined by a film hinge in the area of a parting line and have at least one snap connector in the area of an opposite parting line.